APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.
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EXAMINER
FOLLANSBEE, J

ART UNIT	PAPER NUMBER
2154	

DATE MAILED:

06/01/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

		Application No.	Applicant(s)	
Office Action Summary		09/224,382	Iyer et al.	
		Examiner	Art Unit	
		John Follansbee	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___*three*___ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will
  be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this
  communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Feb 7, 2000*_____ .

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-27*_____ is/are pending in the application.

    4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-27*_____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

    a) ☐ All b) ☐ Some* c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other: _____

DETAILED ACTION

1.   Claims 1-27 are presented for examination.

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and
> distinctly claiming the subject matter which the applicant regards as his invention.

3.   Claims 2-3 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant regards

as the invention.

4.   Claims 2 and 3 end in ";" and should end in --.--.

5.   Claim 7 the feature of "applying all rules in said final set of possible rules" is indefinite

because the specification says that only the "highest priority will be applied" page 5, lines 15-16 of

Applicant's specification.

6.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and
> process of making and using it, in such full, clear, concise, and exact terms as to enable any
> person skilled in the art to which it pertains, or with which it is most nearly connected, to
> make and use the same and shall set forth the best mode contemplated by the inventor of
> carrying out his invention.

7.   Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter

which was not described in the specification in such a way as to reasonably convey to one skilled

in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not support "applying all rules in said final set of possible rules", it only supports applying the "highest priority will be applied" page 5, lines 15-16 of Applicant's specification.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

9. Claims 1-4, 6, 8-17 and 19-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Lakshman et al. (5,951,651) (hereinafter Lakshman).

10. As per claim 1, Lakshman teaches the use of a method of performing network packet filtering (e.g. abstract), said method comprising:

preprocessing a set of rules to generate a set of rule ranges along N dimensions (e.g. col. 3);

searching the rule ranges along said N dimensions in parallel to generate N sets of possible rules along said N dimensions (e.g. cols. 3 and 5);

logically combining said N sets of possible rules to generate a final set of possible rules (e.g. cols. 2, 3 and 5); and

applying said final set of possible rules (e.g. cols. 2, 3 and 5).

11.　As per claim 2, Lakshman teaches the use of generating a rule bit vector for each rule

range along each of said N dimensions (e.g. cols. 2, 3 and 5).

12.　As per claim 3, Lakshman teaches the use of generating a search structure for each set of

rule ranges along each of said N dimensions (e.g. cols. 2, 3 and 5).

13.　As per claim 4, Lakshman teaches the use of one of said search structures comprises a

look-up table (e.g. figure 6).

14.　As per claim 6, Lakshman teaches the use of applying said final set of possible rules

comprises selecting a highest priority rule in said final set of possible rules (e.g. col. 5).

15.　As per claim 8, Lakshman teaches the use of each of said N sets of possible rules comprise

a rule bit vector that specifies a set of rules that may apply (e.g. cols. 2, 3 and 5).

16.　As per claim 9, Lakshman teaches the use of said rule bit vectors are logically ANDed

together to produce a final bit vector of rules that apply (e.g. col. 5).

17.　As per claim 10, it is rejected for similar reasons as stated above.

18.　As per claim 11, Lakshman teaches the use of a method of pre-processing a set of rules for

processing incoming data units, said incoming data units having a set of N dimensions to examine (e.g. cols. 2, 3 and 5), said method comprising:

dividing each of said N dimensions into a contiguous set of rule ranges (e.g. figure 3);

assigning each of said rule ranges a range identifier (e.g. cols. 2, 3, 4 and 5);

creating a search structure of each of said N dimensions that organizes said rule ranges

along each dimension such that an incoming data unit may be quickly classified into one of said

rule ranges (e.g. cols. 2, 3 and 5).

19. As per claim 12, Lakshman teaches the use of said range identifier comprises a rule bit

vector that specifies a set of rules that may apply to incoming data units that fall within the

associated rule range (e.g. cols. 2, 3, 4 and 5).

20. As per claims 13 and 14, they are rejected for similar reasons as stated above.

21. As per claim 15, Lakshman teaches the use of said range identifier comprises an index

value (e.g. cols. 4 and 5 and figure 6).

22. As per claim 16, Lakshman teaches the use of said index values are used by a rule

processor to index into a N dimensional look-up table for a final rule (e.g. cols. 2, 3, 4 and 5 and

figure 6).

23.   As per claims 17, 19-26, they are rejected for similar reasons as stated above.

24.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

25.   Claims 5, 7, 18 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Lakshman et al. (5,951,651) (hereinafter Lakshman).

26.   As per claim 5, Lakshman shows the use of binary or the like searching (e.g. col. 4).

Although the examiner believes that tree searching is an inherent feature of "binary or the like

searching", "Official Notice" is taken that both the concept and advantages of providing for a tree

search structure is well known and expected in the art. It would have been obvious to one of

ordinary skill in the art to include tree searching to Lakshman because it would provide for

efficient and fast searching by only using the "0", "1" theory.

27.   As per claim 7, Lakshman shows only applying the highest priority rule, not all rules to the

packet. "Official Notice" is taken that both the concept and advantages of providing for more

than one rule is well known and expected in the art. It would have been obvious to one of

ordinary skill in the art to include using more than one rule to the packet to Lakshman because it

would provide for fast/efficient packet processing when the highest priority rule causes an error or

fault.

28.   As per claims 18 and 27, they are rejected for similar reasons as stated above.

29.   The following prior art is cited:

a)   6,233,686

b)   6,185,680

c)   6,182,228

d)   6,173,364

e)   6,154,446

f)   5,983,270

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to John Follansbee whose telephone number is (703) 305-8498.

John Follansbee

May 31, 2001.

JOHN A. FOLLANSBEE
PRIMARY EXAMINER